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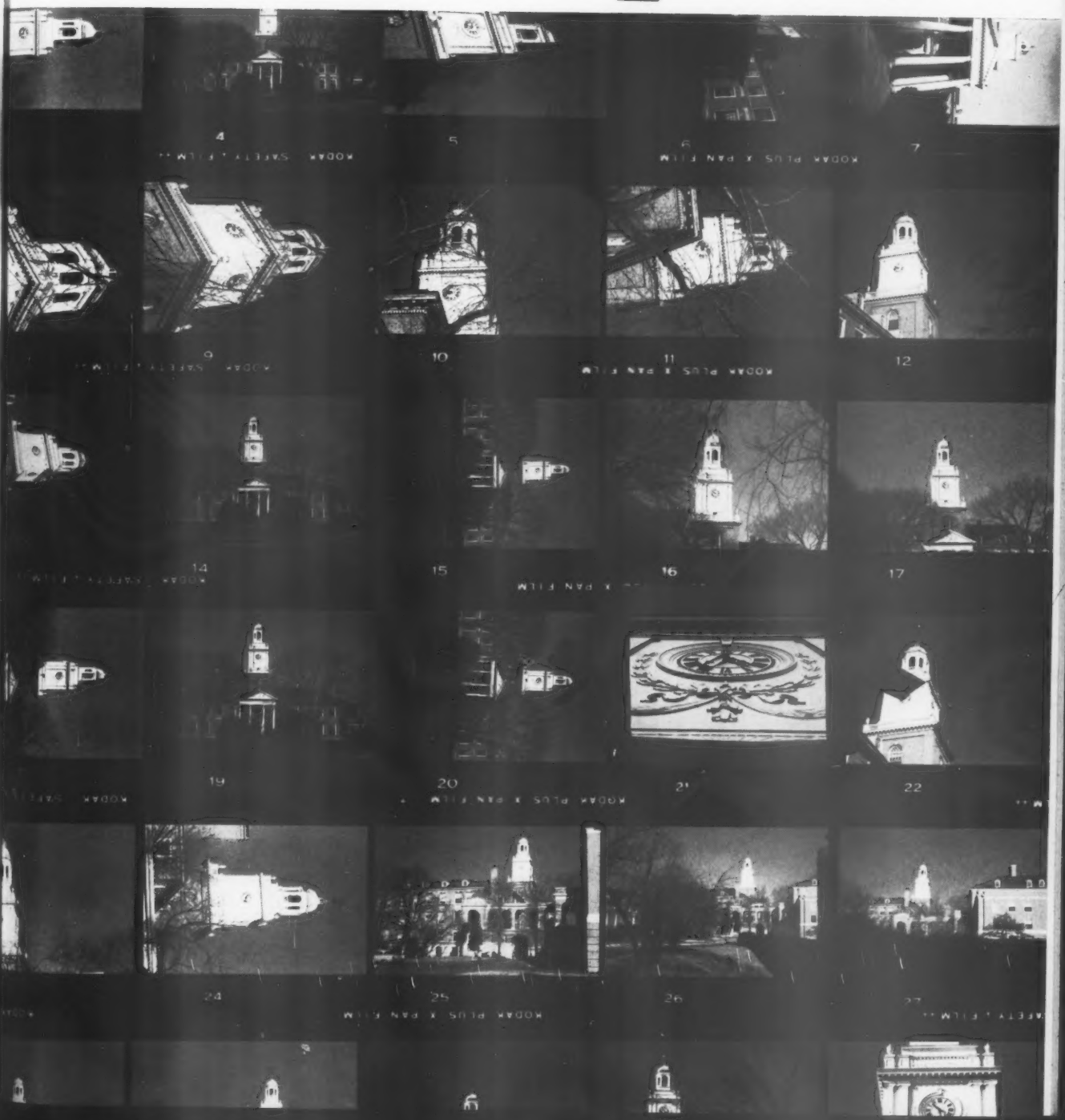
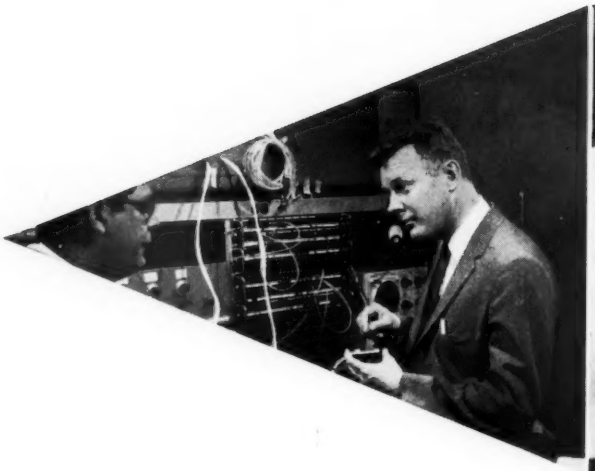
Johns Hopkins

Magazine

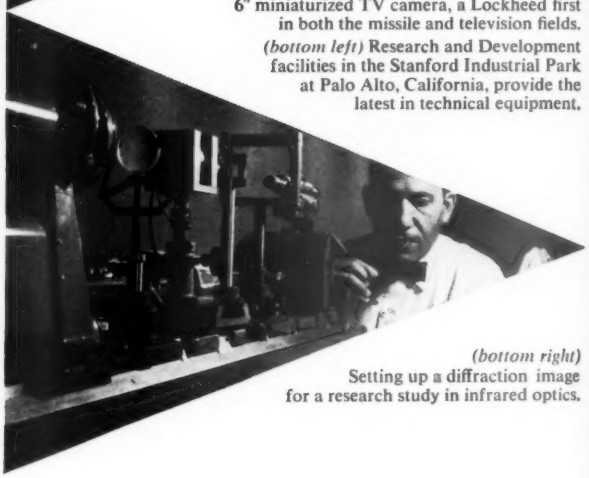




(top left) Transistorizing missile flight control systems by Lockheed scientists has meant significant reductions in weight and space requirements.

(top right) Monitoring new air-borne 6" miniaturized TV camera, a Lockheed first in both the missile and television fields.

(bottom left) Research and Development facilities in the Stanford Industrial Park at Palo Alto, California, provide the latest in technical equipment.



(bottom right) Setting up a diffraction image for a research study in infrared optics.

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The Johns Hopkins Magazine

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In this issue

A SPECIAL REPORT *on the* JOHNS HOPKINS YEAR

by

Milton S. Eisenhower

PRESIDENT OF THE UNIVERSITY

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TOMORROW IS OUR PRESENT TENSE

We Are Involved In Mankind...

THE GREEN LAWNS, the red-brick buildings of the University are visible from the window as I write. Occasionally a car or a pedestrian goes by. The scene is tranquil. To the eye, the University is placid and undisturbed.

If a driver on Charles Street gives us a thought as he passes, perhaps he envies us: youth not yet forced to face life's grim tumult; scholars cloistered in towers that he imagines to be ivory.

He sees no sign that we are deeply involved in the country's earth-satellite program. Or that we are assembling material, sometimes startling, dug from man's almost unplumbable past. Or that we are at the edge of new territory in pediatric medicine. Or that we occupy a rocket-launcher's position in the nation's defense.

The outward signs give the impression of serenity, of aloofness, of withdrawal. Once the impression might have been correct. Today it is only partially so, and then only in a limited sense, a different sense, of the words "serene" and "aloof" and "withdrawn." It is most important that we be impractical (like the scientists of the 1930's who concerned themselves with the atomic nucleus) and esoteric (like the scholars who concern themselves with the Dead Sea scrolls), and that we be intensely practical, as well. We are concerned with medicine (because we believe that man can conquer the ills that assail his body) and we are concerned with poetry (because we believe that man is most nearly Man when he seeks to express the doubt and the faith that lie within his soul).

The University is mid-twentieth-century man in microcosm—man at peace, man in turmoil, man at a crossroads. It is man in his unity, man in his spectacular diversity. It is man with his immediate needs and demands. It is man with a hint of the destiny that awaits him if he can but free himself, for a time, from immediacy.

Little if any of this is evident in the scene I see from this window. Little if any of it is evident to the passer-by as he looks our way.

THE UNIVERSITY is Man, and it is men: nothing more, nothing less, than the sum of those who form it: students, faculty and staff, alumni and alumnae whose lives are closely identified with this place: persons, with personal lives to lead, personal goals to reach; free men, with a determination to hold and renew our freedom; Americans, in a time of crisis and grave peril; humans, the temporary, transient trustees of the human destiny.

We face—all of us—a situation never before faced by any persons, any free men, any Americans, any members of the human race.

In the brief span of one hundred eighty years, we as a people have built and strengthened—and cease-

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THE UNIVERSITY IS ITS STUDENTS . . . STUDYING, LISTENING, OBSERVING.

lessly refined—a society unique in man's annals. With near-miraculous prescience, the country's founders wrote a document creating conditions under which the best instincts and efforts of a dedicated people could thrive. Being a restless, growing people, we have tinkered with the machine ever since. We have had the time, and the undistracted energy, to do so. We have had occasional threats from "outside," but they were fleeting. We could deal with them with speed and finality. And as soon as we had done so, we could turn back to the main task: the endless, and endlessly stimulating, quest for perfection in our way of life.

Recently a subtle change has been forced upon us. It was, in essence, the growth of a threat the nature of which was different from those we had known and dealt with before.

Each previous threat diverted us from our civilization's main stream, but only momentarily. The present threat is a grave, a persistent, an enduring peril—not only to our national security (which would be alarming enough), but to our ideology as free men and to our concept of the human destiny. We cannot meet it, as we have met other threats, by a brief diversion of energy from our main stream. A substantial part of our energy must be devoted *continuously* to the task.

Yet, if our distraction from the main themes of our civilization is not to be permanent, we must do more than simply go on an intellectual and moral defensive. At one and the same time we must defend—and we must continue our forward march.

The simultaneous performance of both these tasks is a new demand upon us. In the present magnitude and complexity, it has not existed before. The genius of our society must be devoted to the fashioning of a means of meeting it.

This is a challenge which we as a people must answer with unprecedented competence and verve—if we are to survive and, simultaneously, to progress.

AND WE ARE BEGINNING to answer it. At first we may have been awed by the enormity of the challenge and the burden it seemed to imply for all of us. Now we are beginning to be exhilarated by the possibilities of our era.

Deeply committed to answering both parts of the challenge are the nation's leading colleges and universities. We are committed, deeply and excitingly, at Johns Hopkins.

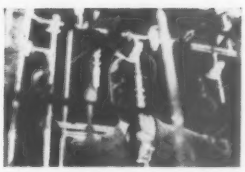
In an unprecedented summoning of resources, the colleges and universities are building themselves to educate record numbers of persons for the tasks that the times require. But educating record numbers is only one part of the job. In addition, the times require *extraordinary* training of *extraordinary* persons, for extraordinary performance and intellectual leadership.

This is the rôle, traditional with us but never more relevant than today, in which Johns Hopkins believes it can render the highest service.

We have delimited this rôle with care. We have no ambition to be all things to all men—to perform all the tasks that American higher education must perform. We do have the strong intention to perform, according to uncompromising standards of excellence, those tasks for which this University is uniquely qualified.

Our faculty and students have long been dedicated to creative scholarship—the imaginative kind of study and research which leads to human advance. The members of this University are now doing research, fundamental and applied, costing nearly thirty million dollars a year. They are in fields as immediately practical as operations research and applied physics for the Army and Navy, and as long-ranged as the development of a new discipline in social relations. Later this report considers some of their work in detail. Even then, in our limited space,we can give only a glimpse of the great scope and intensity of the Hopkins dedication to scholarship which today is helping to create both the defensive strength and the strength to advance which are the central needs and opportunities of our time.

TO PERFORM with effectiveness and distinction, a university with such intentions as ours must have not merely good men and women, but extraordinary men and women, on its faculties and in its student bodies. We need extraordinary physical facilities. We need financial and intellectual strength.



IT IS A FACULTY OF DEDICATED, THINKING MEN ENGAGED IN CREATIVE SCHOLARSHIP.

THE PEOPLE OF A UNIVERSITY ARE INTENTLY INVOLVED IN THE SERIOUS BUSINESS OF STUDY, BUT CAN PLAY, TOO.

To maintain extraordinarily high faculty standards, we must pay good faculty salaries. By frugality, by necessary increases in tuition, and with the help of alumni and other friends of the University, we have already made improvements: an increase in faculty salaries of about 18.5 per cent over the past two years. But our salary levels have not yet recovered to a point comparable with levels at comparable institutions. We need added income of $1,810,000 to bring them where they ought to—and must—be.

If great faculty members are not to waste their talents, if they are to derive the satisfaction that is as important to a good faculty man as his financial compensation, if they are to make their greatest contribution to society, we must provide them with extraordinary students. Measured by every yardstick, the quality of the Hopkins student body—at both the undergraduate and graduate levels, in all divisions of the University—continues to go up. We owe much to our alumni and alumnae in the accomplishment of this improvement. In many of the country's centers of population, they are taking part in the search for talent for Johns Hopkins, and thus making an invaluable contribution to the University's effort to render highest service. To help in this effort, we are, with the aid of far-sighted individuals, foundations, and corporations, adding significantly to our offerings of scholarships and fellowships.

We intend to supply the material resources needed for the high-caliber work of students and faculty men: a new and vastly improved library building; added space and equipment for our department of physics; completion of biophysics laboratories both at Homewood and at the Medical Institutions; a remodeled Gilman Hall; modernization of buildings at the School of Medicine and the School of Hygiene and Public Health. In projecting these improvements, we are encouraged by the greatly increased financial support we are receiving from our alumni and other friends, from foundations, and from business and industry. Our alumni and alumnae, who best know the potential of education, have begun to give regular, stirring, massive support; witness the growth of our annual Roll Call at Johns Hopkins. Business and industry, run by and dependent upon educated men, are interesting themselves as never before in giving to higher education its needed financial strength; witness the

moves by industry, such as that by U.S. Steel, to establish patterns of regular support to the key institutions in American higher education.

EVERYONE WHO JOINS US in our effort to keep Johns Hopkins an extraordinary place can take an additional satisfaction from doing so. The indirect effects of leadership by a university such as this are enormous. The nation's academic standards, in all types of institutions of higher education, evolve by emulation of the standards of a few. Thus, from the earliest days of this University, the standards set at Johns Hopkins have had an immeasurably great effect upon American colleges and universities. The standards we set today and tomorrow can have equally sweeping effects upon the quality of higher education in the United States.

WE ARE ON THE MOVE. We always have been and, I trust, we always will be. The restlessness, the never-ending search for the best way, which characterizes Americans and the leading American universities, has never been more apparent, and more needed, than today.

This is the time of year when, to a university president, this fact is brought home with unusual force. I have been receiving, from the deans of the Hopkins schools, the provost, the treasurer, the directors of our several divisions, the annual reports of organizational and individual activity. Consider some of the things that are going on, and it is possible to catch much of the spirit of this place:

The Schools

The Faculty of Philosophy

THE INTERESTS OF THIS, the oldest and most complex of the University's faculties, range alphabetically from art to zoology, chronologically from the beginnings of the earth to speculation about its end, spatially from the depths of the oceans to the remotest of galaxies.

Within its twenty-two departments, the Faculty embraces a variety of objectives. It offers a liberal arts education at the undergraduate level. It prepares advanced students for careers in college and university teaching and research, and for responsible positions in industry, business, and government. It provides the basic training for those whose advanced study will be centered in schools of engineering, medicine, and law. Finally, the research activity of this Faculty parallels in importance and productivity its total teaching program. Last year, for example, members of the Faculty supervised the expenditure of $728,000 for research alone, the funds coming from foundations, corporations, governmental agencies, individuals, and the University's own resources. Measured in another way, the year's "progress reports" on research totaled 416 publications in scholarly and scientific journals, monographs, and books.

▶ Since the Faculty's prime objective has always been the assembly of distinguished scholars and scientists, the most important events of any year involve people—those who join the Faculty, those who leave it, and those who attain new distinctions and new honors.

In the past year there have been both departures and arrivals. Professors Evsey Domar, of the department of political economy, Sidney Davidson, of the departments of political economy and industrial engineering, and Vincent Dethier, of the department of biology, left Johns Hopkins to assume larger responsibilities in other institutions.

On the other side of the ledger, a number of new appointments have significance for the future. Maurice Mandelbaum, formerly of Dartmouth College—who, more than a year before, had accepted appointment as professor of philosophy and chairman of the department, but who was given

THE CHIEF FUNCTION OF THE UNIVERSITY IS THE DEVELOPMENT AND DISSEMINATION OF KNOWLEDGE—IN THE LABORATORY AND IN THE CLASSROOM . . .

leave of absence to fulfill an earlier commitment as visiting professor at Harvard—arrived on the campus. Even before his arrival Professor Mandelbaum had been active in the selection of junior appointees in philosophy.

Another distinguished addition to the faculty was Adolf Katzenellenbogen, formerly of Vassar College, who has become chairman of the department of fine arts. Dr. Katzenellenbogen's appointment gives strong support to a coöperative program in fine arts which involves Johns Hopkins, Goucher College, the Baltimore Museum of Art, and the Walters Art Gallery. Under this program, staffs of the museums will assist in the instructional programs of Johns Hopkins and Goucher, and joint appointments will be arranged between the two educational institutions. Johns Hopkins' special part in the program will be the development of a strong graduate department, with heavy emphasis upon the history of the arts.

▶ Several years ago a group of departments in the Faculty of Philosophy and the School of Engineering joined in urging the establishment of a department of social relations. A plan for such a department was drawn up and an application made to the Ford Foundation for funds to support it. The application was successful, and a grant of $750,000 was made by the Foundation with the understanding that the University would attempt to provide permanent financing when this fund is spent—presumably at the end of ten years or later.

During the past year a wide search was conducted to find personnel for the new department. Finally the faculty committee charged with the search recommended the appointment of James S. Coleman, now of the University of Chicago, as associate professor of sociology and chairman of the department. Dr. Coleman has recently accepted the appointment, and, with his assistance, additional members are being sought. The department, as projected, will emphasize teaching and research in social theory, an area of special interest to members of related departments in the University.

▶ An important step toward the rebuilding of the Isaiah Bowman department of geography was re-

corded during the year when M. Gordon Wolman accepted appointment as associate professor of geography and chairman of the department. Trained as a geologist, Dr. Wolman's broad interests fit him uniquely for the task of directing the reestablishment of a group seriously depleted in manpower through retirements and resignations.

▶ Another noteworthy appointment during the year was that of Herman M. Kalckar, the distinguished biochemist, who became professor of biology and a member of the McCollum-Pratt Institute. Dr. Kalckar is a native of Copenhagen and received both his M.D. and PH.D. at the university there. He came to Johns Hopkins from the National Institutes of Health, where he had served as visiting scientist since 1953.

RESEARCH

FROM THE BROAD SPECTRUM of research activities carried on within the Faculty during the year, only a few can be selected for special mention—not because they are more important than others, but because they lend themselves to description in nontechnical terms.

▶ During the last year prior to his retirement, William F. Albright continued to direct the Arabian Publications Project, which involves the study and interpretation of the results of the Southern Arabia expeditions of the American Foundation for the Study of Man. The project was initiated in 1953 with support from the A. W. Mellon Educational and Charitable Trust and the Sarah Mellon Scaife Foundation. Two volumes already have appeared, two more are nearly ready for publication, and work is in progress on several others. Even though formally retired, Dr. Albright will see the undertaking through to completion.

▶ Carl B. Swisher, in association with a number of other scholars, is at work on a history of the United States Supreme Court.

▶ Charles S. Singleton is embarking upon the preparation of an edition of Dante's *Divine Comedy* with commentary, a project which is scheduled for

BUT IT MUST ALSO BE LANDLORD, HOUSEKEEPER, RESTAURANT OPERATOR, AND STOREKEEPER.

THE UNIVERSITY'S FIRST RESPONSIBILITY TO THE STUDENT IS THE DEVELOPMENT OF HIS INTELLECT, BUT IT MUST FILL OTHER NEEDS.

completion in 1965, the seventh centennial of Dante's birth.

▶ John Strong, director of the laboratory of physical meteorology and astrophysics, has been at work perfecting an unusual telescope of his own design with which he hopes, through the coöperation of the Office of Naval Research, to ascend by balloon to an altitude of eighty thousand feet for a more intimate view of the planet Mars than is possible from the earth's surface.

▶ Leon Madansky and George Owen completed the installation of a three-million-volt Van de Graaff accelerator, funds for which were provided in large part by the Atomic Energy Commission. They have begun an intensive research program centered around the instrument.

▶ Simon Kuznets, with the continuing support of the Ford Foundation, is engaged in a long-range critical review of literature and statistics on the comparative economic growth of nations. The work is continuing even though Professor Kuznets is currently on a year's leave of absence at Harvard University.

INSTRUCTION

THE FACULTY, through committees and group or departmental organizations, has paid considerable attention during the year to the undergraduate curriculum. The studies resulted in a decision that no fundamental changes should be made in the program adopted some years ago. Most of the recent effort has been devoted to a consideration of methods whereby the progress of students toward the B.A. degree may be defined more explicitly. Special attention has been directed toward the organization of a course of studies for those who, with no immediate professional objectives, are interested mainly in a liberal arts education.

Several departments have introduced substantial changes in the type of instruction made available to undergraduates. This has been notably true in the language departments, where efforts are being made to improve the quality of instruction for be-

ginners. The department of chemistry has organized a radically new kind of freshman chemistry course. Under the direction of Donald H. Andrews, the senior member of the department, the new course will group students according to preparation, ability, and aptitude and will utilize new laboratory techniques, with special emphasis upon experiments which demonstrate fundamental concepts.

▶ At both the undergraduate and graduate levels the quality of entering students has continued to improve. One reason for the improvement is an increase in the number of applications and the opportunity this afforded for greater selectivity in admissions. While there has been a modest increase in the number of students, both graduate and undergraduate, the totals are still within the stated policy of limiting enrollments and of admitting additional numbers of students only in those areas in which they can be accommodated without expansion of faculty or other resources.

The School of Medicine

ORDERLY CHANGE is the hallmark of stability. Among the many evolutionary changes which occurred in the School of Medicine last year, five deserve special mention.

▶ Most important of these from the standpoint of student and faculty interest (and faculty time) was the detailed formulation of the curriculum for the medical education program. This program, as presented in this magazine last month, places renewed emphasis on three points: (1) shortening the total time required from the end of high school to completion of the medical curriculum; (2) greater opportunity for depth of study, including research; and (3) the value of the humanities and social sciences to the physician and medical scientist.

To encompass these three objectives within the new curriculum was the task of the medical faculty during the past year. Gradually, a general outline became clear. The new curriculum—involving both the Faculty of Philosophy and the School of Medicine—would be enlarged to include five years of forty weeks each for a total of two hundred academic

IT MUST PROVIDE HIM WITH EXTRACURRICULAR ACTIVITIES AND THE OPPORTUNITY FOR RECREATION.

IN ESSENCE, HOWEVER, THE UNIVERSITY IS THE INDIVIDUAL IN SEARCH OF KNOWLEDGE, EITHER ALONE . . .

weeks as compared with the old curriculum of one hundred and twenty-eight weeks covering a period of four years. Some students would be accepted into the first year of the program after the sophomore year of college, although a majority of the medical class would enter the second year of the new curriculum following graduation from college. All students would have to complete the requirements for the B.A. degree before proceeding to the third year of the new curriculum, and before being formally admitted as candidates for the M.D. degree.

Beginning with the third year, selected students may accelerate the pace of their required medical studies and, by using summer quarters, complete their formal course requirements by the end of the fourth year. These students could then use the fifth year for internship or other elective work, thus gaining an additional year of experience before formal graduation at the end of the fifth year.

Other features to be emphasized in the new curriculum are greater flexibility in required courses, improved facilities for student research, and greater opportunities for both curricular and extracurricular contact with the humanities, social sciences, and arts.

▶ A second major development (clearly important in implementing the new curriculum) was the opening of the new Medical Residence Hall for the 1957-58 academic year. The building not only provides a comfortable home for many of the medical students, but it also serves as a focal point for the extracurricular activities of students and junior faculty of all the medical institutions.

▶ A third development of potentially major significance was the organizational change which established three basic science departments—physiology, microbiology, and pharmacology—as joint departments for both the School of Medicine and the School of Hygiene and Public Health. Thus, departments in both medicine and public health which are concerned with the more applied problems will have access to and derive support from the same basic science departments—a situation which should lead to a greater intellectual interplay between the practice of medicine and the practice of

public health. In addition, dual appointments were made in biostatistics and biomathematics in the two schools.

▶ Related to the development just mentioned was the decision to establish a department of biophysics as one of the joint basic pre-clinical departments of the School of Medicine and the School of Hygiene and Public Health. Substantial gifts from the Rockefeller Foundation and the National Institutes of Health will assure the erection of a biophysics building on the site of the old physiology building, and architectural plans are now being developed.

▶ Finally, the advisory board of the medical faculty formally recognized the obligation of each department of the School of Medicine fully to develop teaching and research in the prevention of disease (or the preservation of health) as it relates to the respective disciplines. The several departments of the School of Hygiene and Public Health will continue to provide instruction for medical students in the general field of public health.

▶ Because of the strong departmental organization of the School of Medicine, the selection of a new departmental chairman is an event of major significance. The directorship of two departments changed at the end of the past academic year.

Arnold Rice Rich retired after thirty-nine years as a member of the faculty, the past eleven years of which were spent as Baxley professor of pathology and director of the department of pathology. He was succeeded by Ivan L. Bennett, Jr. Dr. Rich has made many notable contributions to medicine, particularly through his investigations on tuberculosis and more recently on the basic immunology and pathology of hypersensitivity reactions. He has been a forceful and inspiring teacher and, through his writings and provocative discussions with the faculty, has had an important influence on medical education in this institution. Dr. Rich will continue his association with the Medical School as Baxley professor emeritus of pathology.

Dr. Bennett, a graduate of Emory University School of Medicine, was at one time a member of the department of pathology, but in recent years

OR WITH OTHER SCHOLARS IN A POOLING OF IDEAS AND AN EXCHANGING OF INFORMATION.

THUS THE UNIVERSITY BECOMES A PLACE OF LEARNING, AND THERE MUST BE TEACHERS TO LEAD THE WAY.

has held primary appointments in departments of medicine at Yale and at Johns Hopkins. At thirty-six years of age, he has already made significant contributions to the pathology of infectious diseases.

At the end of the academic year, Richard H. Shryock retired as William H. Welch professor of the history of medicine and director of the Institute of the History of Medicine. He was succeeded by Oswei Temkin. Dr. Shryock is known primarily for his studies on early American medicine and modern developments in medical education and medical research. These studies were influenced by his early training as a general historian and sociologist. Dr. Shryock, while holding the title of William H. Welch professor emeritus of the history of medicine, will return to his former home to become librarian of the American Philosophical Society in Philadelphia.

Dr. Temkin came to the Johns Hopkins Medical School in 1932 from the faculty of the University of Leipzig, where he was associated with two outstanding medical historians, Henry Sigerist and Karl Sudhoff. Here he continued his association with Dr. Sigerist and became an associate of Dr. Welch. Through his wide knowledge of ancient and modern languages, including Arabic and Russian, he brings to bear on medical history a wealth of general scholarship. His deep interest in Greco-Arabic medicine and in the philosophy of science will place the department of the history of medicine in a favorable position to fulfill its rôle as a bridge between medicine and the humanities in the new medical program.

One other appointment should be briefly mentioned. Jerome Cornfield, although holding his primary appointment as director of the department of biostatistics in the School of Hygiene and Public Health, has also been appointed professor of biomathematics in the School of Medicine.

RESEARCH

In 1897, Dr. William Osler received from an anonymous donor $750 for each of five years for studies on tuberculosis, thus beginning a pattern of research support from extra-University sources which brought into the School of Medicine last year

$3,274,609, nearly half of its total budget of $6,958,955.

In addition, substantial support for research is derived from the general funds of the University, for in the Medical School teaching and research have, from the beginning, been inseparably blended.

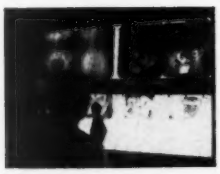
The largest single source of extra-University research support is the Department of Health, Education and Welfare, through the National Institutes of Health, which accounted for 61 per cent of the total outside research funds last year. Individuals and private foundations contributed 16 per cent of research funds; federal contracts made up 12 per cent; and voluntary agencies like the American Cancer Society gave 9 per cent.

Perhaps the change in the pattern of research support may be seen more clearly by comparing last year's budget with that of 1937–38 for two departments, one pre-clinical and one clinical. Twenty years ago the department of physiological chemistry spent about $28,000. Last year, the same department's expenditures totaled $214,000, almost nine times as much. Equally significant is the fact that the general funds of the University supplied the entire 1937–38 budget, while last year only one third of the budget came from that source, with the remainder coming from gifts and grants.

Figures for the department of medicine are similarly revealing. Twenty years ago University funds accounted for 48 per cent of the $136,000 budget, and 41 per cent came from individuals and private foundations. Last year the total budget had risen ten-fold to $1.3 million, with only 12 per cent coming from the University general income and 11 per cent from individuals and private foundations. The remaining 65 per cent came from governmental sources.

▶ Some notion of the orientation of research in the School of Medicine may be obtained from analyzing the broad categories of grants from the National Institutes of Health. The nearly two million dollars received by the School of Medicine last year were designated for research as follows: 31 per cent for studies pertaining to neurological diseases and blindness; 24 per cent for heart disease;

THE INTERESTS OF A UNIVERSITY ARE VARIED AND EXTEND INTO MANY FIELDS.



THE UNIVERSITY IS GREATLY CONCERNED WITH MAN'S PHYSICAL WELL-BEING . . .

15 per cent for cancer; 13 per cent for arthritis and metabolic diseases; 10 per cent for mental health; 3 per cent for allergy and infectious diseases; and 4 per cent for miscellaneous projects.

These bare figures, however, scarcely convey the extent to which the medical faculty is so deeply and intimately involved in the future health of the people of America and, indeed, of the world. Through this incessant and dynamic probing of the whole spectrum of human biology, the Johns Hopkins University is certainly one of the great sources of hope and confidence that continuing progress will be made in the prevention and alleviation of human disease and suffering.

▶ Last year, 690 scientific papers and twelve books were published by members of the medical faculty. These investigations ranged from studies on the effect of the nervous-system extracts upon inhibition and excitation in single nerve cells, to the effect of tranquilizing drugs on conditioned reflexes; from studies on the mechanism of the conversion of cellular foodstuffs to energy within the cell, to studies of the fate of arterial implants into heart muscle; from a study of the basic mechanisms of fever, to studies on the genetic aspects of obesity.

In some instances, the fruits of these investigations have an immediate impact on human health, but in many instances years of additional research may be necessary before the basic studies can be translated into practical terms of clinical medicine.

▶ This impressive growth in research, while not unique to Hopkins, leads to certain generalizations and speculations.

First, was this growth foreseen and planned for? No. It burst upon us, and each department head, in his own way, made the most of it. Johns Hopkins' long-known competence in medical research put the medical faculty in a singularly favorable position to take full advantage of this opportunity when it came.

Has this expansion in research activity been a good or a bad development? Good, by and large. The faculty of the Medical School is now in a better position to make important contributions to society; the old laboratories have been filled with modern

equipment, and many new laboratories have been built, including the Clinical Science Building completed three years ago and the new Basic Science Building which is under construction with funds provided by the federal government, under the Health Research Facilities Act, and by several individual donors and foundations.

What of the future—has a plateau been reached, or is expansion likely to continue? Almost certainly Johns Hopkins has not reached its maximum capabilities for productive research, or the level which society needs or will support. It is probable that the Medical School is just now entering an era of great potentiality for bringing the advances of physics, chemistry, and mathematics to bear on the problems of health and disease in man. For this we do not need much larger clinical facilities, but over the long term we shall need increased facilities for clinical investigation. The new Clinical Center in Bethesda, Maryland, which has a very high ratio of research space to patient-care space, suggests the trend of the future in all great research centers. Good judgment will be essential to assure, on the one hand, that growth is soundly based, and, on the other, that the School of Medicine does not fall short of its optimum potentialities.

The School of Engineering

THE ACTION of the Engineers' Council for Professional Development accrediting the five undergraduate curricula in the School of Engineering, reported on page 29 of this issue, in some respects may be taken as a recognition of the changes in engineering education which have taken place in the last seven or eight years.

It was in 1951, after years of intensive study, that the School of Engineering at Johns Hopkins decided to reorganize its curriculum and place strong emphasis upon training in the basic sciences and the fundamentals of engineering. Concurrently, certain specialized and practical courses were dropped, and opportunity was afforded engineering students to devote more time to studies in the humanities and social sciences. Since 1951 other engineering schools have turned in the same direction, and Johns Hopkins may lay claim to some leader-

AND WITH HIS PROSPERITY AND HIS STANDARD OF LIVING.

THE ACTIVITIES OF A UNIVERSITY TRANSCEND ITS CAMPUS AND INVOLVE PEOPLE OF DIFFERENT AGES, CULTURES, AND INTERESTS.

ship in the transition. Approval of the new curricula by the accrediting group provides additional confirmation of the soundness of the approach.

Even during the past year, study and evaluation of the curricula in the engineering departments continued. The department of electrical engineering proposed and adopted a new undergraduate program; so did the department of industrial engineering.

▶ One of the principal problems has been to acquire and retain qualified faculty members. In spite of difficulties the School suffered only one major loss last year, with the resignation of Robert S. Ayre, chairman of the department of civil engineering.

▶ The appointment of Ferdinand Hamburger, Jr., chairman of the department of electrical engineering, to the additional post of director of the radiation laboratory has produced a significant improvement in the relationships between the latter group and the academic departments of the University. The radiation laboratory is engaged in highly important research under sponsorship of the Air Force. While part of its work is classified, a large fraction is not, and thus an opportunity exists for wide interchange between the laboratory group and the related departments in the School of Engineering and the Faculty of Philosophy. A substantial number of laboratory staff members are pursuing course work and even degree programs in the University, many of them in the department of electrical engineering. Dr. Hamburger's joint appointment, therefore, facilitates a mutually important exchange.

▶ During the year the School sponsored two industry-University conferences. In the first, research sponsored in the School of Engineering by the American Newspaper Publishers Association Research Institute was reported upon at a two-day meeting of newspaper executives. The success of the meeting, which was attended by 150 persons, led to a request for a similar conference on the West Coast during the summer. In June the departments of electrical engineering and industrial

engineering, the Applied Physics Laboratory, and the Operations Research Office again joined forces to sponsor an intensive course in operations research and systems engineering for employees of industry, government, and business. The General Motors Corporation, which was strongly represented among the registrants for the two-week program, asked that it be repeated in Rochester, New York, for personnel centered there.

RESEARCH

RESEARCH ACTIVITY of members of the faculty continued high. As had been the case in recent years, much of the work was supported under contract by the Defense Department and other governmental agencies.

The School of Hygiene and Public Health

IN ITS SECOND YEAR of intensive work, the committee on the educational objectives of the School of Hygiene and Public Health has come forward with recommendations designed to strengthen the program of the School and to bring some parts of it more closely into line with recent technological developments.

The committee directed its attention especially to the broad and rapidly changing field of environmental medicine and recommended strongly that the areas of radiobiology and industrial health be strengthened within this department. Although the two are, to a degree, complementary, the committee also recommended the retention of the present department of sanitary engineering, which it believes has increasing importance in developing the engineering aspects of radiological health and air pollution control.

Turning its attention to the instructional program, the committee recommended that the student body be limited to those who have the highest qualifications for undertaking work leading to a doctoral degree.

All of the recommendations have been approved by the advisory board of the School and, together

IT IS A MEETING PLACE OF LEADERS. IT OFFERS ITS SERVICES AND TALENTS TO BUSINESS, INDUSTRY, LABOR, AND GOVERNMENT.

IT IS A PLACE OF FREE DISCUSSION, HOME OF THE ARTS, KEEPER OF KNOWLEDGE.

with earlier findings of the same committee, now constitute a body of policy decisions which will govern the development of the School in the immediate future.

▶ While no definite decisions have been made, consideration has been given during the past year to the development of a degree program in forensic medicine. The need for such a program has become increasingly apparent. Since the responsibility for the development of forensic medicine is more and more centered in departments of health, the School of Hygiene seemed a logical location for the program's establishment. Investigations are now under way to determine the possibility of obtaining financial support in this field.

▶ In addition to the establishment of joint departments of microbiology, pharmacology, and physiology, described in the School of Medicine section of this report, further steps have been taken to integrate related programs in the School of Medicine, the School of Hygiene and Public Health, and the Johns Hopkins Hospital. The reorganized division of chronic diseases in the School of Hygiene has close working relationships with the department of medicine in the Medical School, and all staff members of the division hold appointments in both institutions. This provides, among other advantages, a greatly improved opportunity for utilization of clinical facilities. Members of the division of maternal and child health hold joint appointments in the departments of obstetrics and pediatrics in the School of Medicine, and the division of mental hygiene has continued to maintain close working relationships with the Medical School's department of psychiatry.

▶ The program of exchange between the School and the University of the Philippines is now in its fifth year. During the period under review, Paul Harper, head of the division of maternal and child health, has assisted in setting up a similar department at the University of the Philippines, and Paul Lemkau has assisted in the organization of a division of mental health there. Ruth Alice Davis and Marcia Cooper also have taken part in the program.

The exchange arrangement, which will continue for one more year, has been evaluated by the Rockefeller Foundation staff, and the results of the evaluation indicate that it has been of great value to the University of the Philippines.

▶ The death of Joseph Earle Moore, head of the division of chronic diseases, was a severe loss to the School. His place has been taken by Abraham Lilienfeld, who has been appointed professor of public health administration and head of the chronic disease division. Dr. Lilienfeld, a former member of the faculty in the department of epidemiology, has, for the past five years, been director of research at the New York State Cancer Hospital in Buffalo.

▶ In the department of biostatistics, Jerome Cornfield has been appointed professor and head of the department, and Margaret Merrell has been promoted to a professorship. Dr. Merrell served as chairman of the department in the period following the resignation of William G. Cochran and before Mr. Cornfield's arrival at the School. Lloyd Rozeboom, who had been associate professor of pathobiology, has been appointed to a professorship of medical entomology.

▶ Charles Murray Wylie has been named to head the new long-term program of field research in public health administration which is being supported by funds from the W. K. Kellogg Foundation. Sven Nissen-Myer, of the University of Oslo, has been appointed associate professor in epidemiology.

▶ As in past years, the School has relied heavily on gifts and grants and, to some extent, upon governmental contracts for support of its widespread research program. The total of funds expended during the past year and which were received from governmental sources, foundations, corporations, and individuals was $1,335,109. Of the total, $526,769 came from the Department of Health, Education and Welfare for research projects and $229,830 from the same agency for support of the teaching program. Foundations provided $194,688 for research, and contracts with a variety of governmental agencies provided an additional $180,535 for research. Fellowship grants to the School totaled $30,241.

The School of Advanced International Studies

BOTH IN Washington and in Bologna, Italy, unusual activities have centered about the School of Advanced International Studies during the year.

▶ In Washington the School undertook a significant educational venture designed to provide—in a series of "institutes"—intensive and specialized training for selected groups of officers of the International Coöperation Administration. This mid-career training program was designed especially for persons engaged in the programming of foreign technical and economic assistance.

▶ The School has received a grant from the Department of State for the purpose of planning and organizing a senior training course for high-ranking foreign service officers and similar personnel from other governmental agencies. The program was planned in connection with the work of the State Department's Foreign Service Institute.

▶ Under the provisions of Public Law 480 the University has received a grant from the United States Government of the equivalent of $552,000 in counterpart funds for use at the Bologna Center of the School. A substantial part of this total has been made available for the acquisition of land and the construction of a building.

▶ The School's study centers at Rangoon, Burma, and Jogjakarta, Indonesia, have been playing a useful rôle in the universities with which they have been associated, particularly through the assistance they have been able to lend in the development of programs in international relations.

▶ The Washington Center of Foreign Policy Research is now in its second year of operation.

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McCoy College and the Summer Session

FOR THE FIRST TIME in many years, enrollment in credit courses in McCoy College—the University's afternoon and evening division—declined. The number enrolled in informal courses, however, was maintained. The total of registrants in all courses was 6,380.

The decline in the number of students in credit courses was attributed in part to an increase in tuition fees, in part to a substantial reduction in the number of veterans receiving educational benefits, but in largest part to the business recession, which brought unsettled conditions among Baltimore industries.

There was a slight increase in enrollment in the Summer Session, which offered instruction both in daytime and at night. The popularity of the evening courses, which were introduced experimentally two years ago, was evidenced by the fact that 365 persons enrolled for night courses only, of a total of 1,628 registrants.

Sponsored Research

The Applied Physics Laboratory

THE UNIVERSITY'S PARTICIPATION in research activities under contract with the United States Government continued at about the level of previous years. At the Applied Physics Laboratory—largest of the off-campus research activities—work continued on guided missiles for the U. S. Navy, and the Laboratory had the satisfaction of seeing its products go into use in the fleet. The Terrier missile is now installed on three operational ships, and the Cruiser *U.S.S. Galveston* has been commissioned as a guided missile ship carrying the Talos missile system.

Moving into new areas, the Laboratory has established two groups whose concern will be the development of a body of first-hand experience, competence, and judgment in fields of artificial satellites and space navigation. Preliminary work of these groups already has led to the formulation of a project of great significance.

Shortly after the launching of the first Russian satellite, a small number of staff members put together the apparatus necessary for observing the Doppler shift in the radio signal emitted by a satellite as it approaches and recedes from the earth. Although this method of tracking satellites had received little attention, it was found that it provided an excellent means of determining the orbit of a radiating satellite, if the necessary complicated calculations were reduced to a usable form. With the aid of the Univac computer, suitable simplification of the mathematics was achieved, and the value of the Doppler tracking method was demonstrated.

▶ While a substantial part of the work of the Laboratory is directed toward immediate needs of the Navy, it continues to maintain a large group devoted to basic research. During the year members of the staff presented thirty-five papers to scientific and engineering societies.

▶ The Laboratory was signally honored this year by the award to nine of its members of the highest and second highest honor the Navy can bestow on civilians outside the government. This recognition of the Laboratory's part in the development of the Terrier from first idea to installation aboard ship

was made when Admiral F. S. Withington, chief of the Bureau of Ordnance, on behalf of the Secretary of the Navy, presented Navy distinguished public service awards to Ralph E. Gibson, Alexander Kossiakoff, Henry H. Porter, Richard B. Kershner, and Robert C. Morton, and Navy meritorious public service citations to Alvin R. Eaton, Jr., Richard T. Ellis, Roland W. Larson, and Thomas W. Sheppard.

▶ During the year plans were drawn and work started on an additional unit at the Howard County laboratory—the second since the original structure was completed. The new space will provide relief for crowded conditions at other locations and will permit the consolidation of related research and development activities.

Operations Research Office

A MAJOR SHIFT in the direction of effort in the program of the Operations Research Office occurred during the year. Having completed a comprehensive study of the air defense of North America, a large part of the staff turned to a similarly extensive examination of the problem of future ground warfare, especially in limited wars. Attention first was focused on this problem at the PISGAH study conference held in Maine in the summer of 1957, one of the results of which was the development of a detailed long-range research and development program for the Army.

▶ Early in 1958 it became clear that field teams which had been assigned to Army establishments in Hawaii and at Heidelberg could be employed more profitably at ORO headquarters. Both field groups, therefore, were terminated. Any future area studies that ORO undertakes will probably be conducted by temporary groups from ORO-Washington.

▶ Progress toward the construction of a building eventually to house all ORO activities was halted during the year when the University failed to obtain a special exception to the zoning ordinance of Montgomery County. The exception would have permitted the use of a tract of land in the Bethesda

IN ADDITION TO ITS REGULAR ACTIVITIES, THE UNIVERSITY OFFERS ADULT EDUCATION COURSES AT NIGHT AND DURING THE SUMMER.

area. The decision has been appealed, but, pending the outcome of the appeal, specific planning for the building has been postponed.

▶ Ellis A. Johnson, director of the Operations Research Office, received the highest civilian honor the Department of Defense confers when Secretary of the Army Wilber M. Brucker bestowed upon him the distinguished civilian service medal.

Institute for Coöperative Research

THE NUMBER of research contracts under the cognizance of the Institute for Coöperative Research remained at about the same level as in the previous year—112 as contrasted with 111—but the dollar volume of expenditures under these contracts increased by nearly a half million dollars, to a total of $3,594,588. The distribution of sponsorship was as follows: AIR FORCE: 40 per cent; ARMY: 21 per cent; NAVY: 15 per cent; ATOMIC ENERGY COMMISSION: 16 per cent; OTHERS, including non-Federal Government and industrial: 8 per cent.

Some ninety-eight members of the faculties of the University participated in the contract research. The total number of employees, both part-time and full-time, on all contracts, was 562.

▶ Reference has been made in the report of the School of Engineering to the appointment of Ferdinand Hamburger, Jr., as director of the radiation laboratory, the largest group within the ICR. During the year, the proportion of unclassified work carried on in this laboratory continued to increase, rising from about 40 per cent in the previous year to 50 per cent during the past year.

IN THE GENERAL AFFAIRS OF THE UNIVERSITY, AN IMPORTANT CHANGE: THE RETIREMENT OF CARLYLE BARTON AND THE ELECTION OF CHARLES S. GARLAND AS PRESIDENT OF THE BOARD OF TRUSTEES.

The Trustees

CARLYLE BARTON, who had served as president of the board of trustees for seventeen years and as a member of the board for a total of thirty-two years, retired from the presidency last January. Charles S. Garland, who had been vice-president of the board for five years, succeeded Mr. Barton in the presidency, and Stuart S. Janney was elected vice-president.

In recognition of his distinguished services to the University, the honorary LL.D. degree was conferred on Mr. Barton last February 22.

▶ With the strong endorsement of the faculties, the board has authorized the establishment of visiting committees whose duty it will be to pay special attention to specific parts of the University's instructional program. Each committee will be headed by a trustee, and the membership will include distinguished alumni and friends of the University.

The committees are expected to begin their activities during the present academic year. After their visits to the schools or departments to which they are assigned, they will report through the president to the board of trustees.

The following trustees have accepted appointment as chairmen of the committees: SCHOOL OF MEDICINE, Devereux C. Josephs; SCHOOL OF HYGIENE AND PUBLIC HEALTH, Thomas B. Butler; SCHOOL OF ENGINEERING, Joseph M. McDaniel, Jr.; SOCIAL

Financial Highlights: The University

▶CURRENT INCOME, $20,775,000 (EACH BOOK REPRESENTS $500,000)

Tuition and fees	$ 3,304,000	16%
Educational and general endowment income	$ 2,419,000	11%
Reimbursement of indirect costs on research projects	$ 1,777,000	8%
Research contracts (ICR)	$ 3,595,000	17%
Gifts and grants	$ 7,372,000	37%
Other income	$ 2,308,000	11%

▶CURRENT EXPENDITURES, $20,241,000

Administration and general	$ 1,991,000	9%
Plant operation and maintenance	$ 1,595,000	9%
Instruction and departmental research	$13,673,000	67%
Library	$ 453,000	3%
Other expenditures	$ 2,529,000	12%

In addition to the activity indicated at the left, the University received and expended $19,231,000 for research at the Applied Physics Laboratory and the Operations Research Office undertaken in behalf of the national defense effort.

*

The Endowment Portfolio

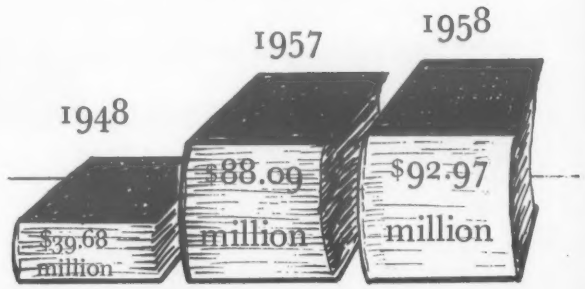
(ITS COMPOSITION AS OF JUNE 30, 1958)

Common stocks	49%
Bonds	42%
Mortgages and other	7%
Real estate	2%

*

Endowment Growth

(MARKET VALUE OF INVESTMENTS)



Financial Highlights: The Hospital

1958 Endowment Portfolio

Common stocks	44%
Bonds	44%
Mortgages and other	7%
Real estate	5%

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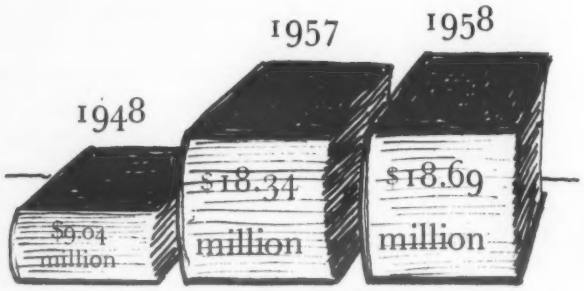
Endowment Growth
(MARKET VALUE OF INVESTMENTS)



▸CURRENT INCOME, $11,440,000 — ONE INCH EQUALS $3 MILLION

Patients' payments	$ 9,279,000
Gifts, grants, bequests	$ 148,000
Endowment income	$ 788,000
Other income	$ 1,225,000

▸CURRENT EXPENDITURES, $12,006,000

Nursing care and special services	$ 7,391,000
Dietary	$ 1,193,000
Household and property	$ 1,285,000
Administration	$ 1,324,000
Pensions and retirement	$ 190,000
Depreciation of buildings and equipment	$ 623,000

SCIENCES, William McChesney Martin, Jr.; HUMANITIES, Robert G. Merrick; BIOLOGICAL SCIENCES, Vannevar Bush; PHYSICAL SCIENCES, John Olin; SCHOOL OF ADVANCED INTERNATIONAL STUDIES, Paul H. Nitze.

▶ During the year three persons were elected to life membership on the board of trustees: Allan C. Davis, Baltimore business man and former alumni trustee; Carrol M. Shanks, president of the Prudential Insurance Company of America; and William McChesney Martin, Jr., chairman of the Federal Reserve Board. The four-year term of Walter S. Baird as alumni trustee expired, and Joseph M. McDaniel, Jr., secretary of the Ford Foundation, was elected in his place.

Commencement, 1958

THE GRADUATING CLASSES gathered on Keyser Quadrangle on June 10 for one of the most impressive commencement ceremonies ever held at Johns Hopkins. The honored guests were the President of the United States and the Prime Minister of Great Britain. President Dwight D. Eisenhower introduced Prime Minister Harold Macmillan, who gave the commencement address. The official party arrived by helicopter, landing at one of the athletic fields.

Evaluation

THE UNIVERSITY was host during the year to twenty-nine educational experts whose task it was to examine the institution in all its parts—academic, administrative, and fiscal. The "evaluators" as a group represented the Commission on Institutions of Higher Education of the Middle States Association of Colleges and Secondary Schools. Their task—similar to that carried out periodically at most colleges and universities—was to determine whether or not Johns Hopkins was qualified to retain its membership in good standing in the organization. Some of the evaluators, however, wore two hats. As representatives of professional accrediting agencies, their special function was to examine in detail the University's professional programs and to place upon them their stamp of approval—or disapproval.

The results of their rather complicated procedures can be summarized briefly: (1) the University retained its good standing in the Middle States Association; (2) the School of Medicine, the School of Hygiene and Public Health, and the undergraduate curriculum in the department of chemistry all were reaccredited by the appropriate professional agencies; and (3) all five of the undergraduate departments in the School of Engineering were accredited. The last action involved reaccreditation of the department of chemical engineering, which had lost its status some time ago due to a decline in personnel, and accreditation for the first time of the new department of industrial engineering, which had not previously been inspected by representatives of the accrediting agencies.

On the whole, the results of the evaluation were gratifying. The report upon which the findings were based was mainly laudatory, but in part constructively critical. Although essentially a confidential document, it has been distributed to those persons in the University to whom it is important to know how Johns Hopkins looks to a group of outside experts.

Carnegie Laboratory

PLANS ARE PROGRESSING for the construction at Homewood of a new building to house the embryological laboratory of the Carnegie Institution of Washington. For some thirty years the laboratory has occupied quarters at the School of Medicine—quarters which have become increasingly inadequate. When it became clear that a move was necessary, the University offered the use of a tract at the northwest corner of the Homewood campus, at University Parkway and San Martin Drive, and the Carnegie Institution accepted the invitation. The Institution will grant funds to the University to cover the costs of construction, and the University will turn over the completed building to the Institution on the basis of a long-term agreement.

The move should be mutually beneficial. It will

enable closer relationships to be established between members of the laboratory staff and the faculty in the biological sciences at Homewood, and at the same time permit the continuance of long-existing relationships with the faculty of the School of Medicine.

The Johns Hopkins Fund

THE TEN-YEAR development program of the University and the Hospital received new impetus with the appointment of Gavin A. Pitt as vice-president of both institutions and as president of the Johns Hopkins Fund. In the latter capacity he assumed direction of a development program which has an announced goal of $76,380,000. Aiding him are Wilbert E. Locklin, assistant to the president, who will concentrate on the Homewood phases of the program, and Charles R. Estill, whose responsibility will be mainly for that part of the program which involves the medical institutions.

The Johns Hopkins Fund was established in 1951 as a coördinating agency for the fund-raising efforts of both the University and the Hospital. Its activities are directed by a board of trustees in which the two institutions have equal membership. D. Luke Hopkins, who is both a University and a Hospital trustee, is chairman of the board.

THE UNIVERSITY IS A PLACE OF TRADITION AND CEREMONY . . . IN THE SHADOWS OF ITS NOBLE BUILDINGS, GREAT MEN HAVE STOOD.

✶

IN REVIEWING the accomplishments of the Hopkins year, one is struck by the way in which the future tense is implied by the present. The men and women who are the University—the faculties, the alumni and other supporters, the students—are building not only for today, but for the tomorrows that are, and ought to be, a true university's present-tense concern.

The dual job that must be America's in the future is already being undertaken by this University. We are defending, and we are marching.

The calmness that I saw from my window as I began writing this report might well be interpreted as determination.

—MILTON S. EISENHOWER

To Repair An Omission . . .

THERE IS a conspicuous omission in Dr. Eisenhower's report. At the request of the editors, the president of the University's board of trustees has repaired it (*below*).

The President

IN KEEPING with the practice he established upon his arrival at Johns Hopkins, Milton S. Eisenhower has continued to devote by far the largest part of his time and energies to the immediate duties of the presidency. Among them are such problems as budgets, the ever-changing academic program, the maintenance and enhancement of faculty quality, and, above all, planning for the future. Also among them are activities which, technically, are not administrative—but which are vitally important in the maintenance of Johns Hopkins' position among the nation's leading universities. The University's development program, designed to provide a strong financial base for the myriad activities described in Dr. Eisenhower's report, has experienced and benefited from his dynamic leadership.

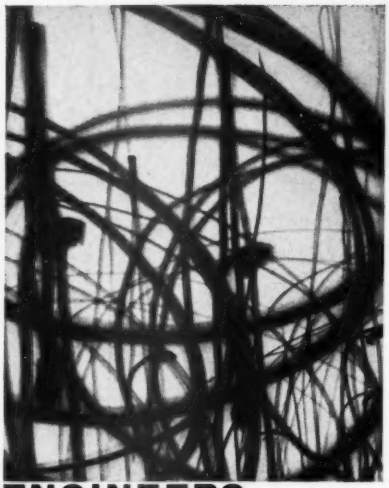
The most time-consuming and probably the most rewarding of his activities have been the tours which Dr. Eisenhower has made to centers of alumni population throughout the country. He has visited alumni groups in Pittsburgh, Cleveland, Chicago, Washington, New York, Atlanta, Denver, Seattle, San Francisco, Los Angeles, Houston, Boston, Schenectady, Philadelphia, and Wilmington, Delaware. Early in 1959 he is scheduled to add Columbia, South Carolina, Durham, North Carolina, Richmond, and Miami to the list.

Moving from the Hopkins family to much larger audiences, Dr. Eisenhower has had numerous opportunities to tell the story of Johns Hopkins publicly, and to expound his views on education, in formal addresses and through other channels. During the last year he appeared on the "Johns Hopkins File 7" and the Edward R. Murrow "Small World" television programs; he was the subject of a detailed interview in *U. S. News and World Report* and of a cover story in *Time*.

At the request of the Fund for the Advancement of Education, Dr. Eisenhower has served as chairman of the Committee on Government and Higher Education, which, with the help of a research staff including two Johns Hopkins faculty members, has studied the extent of interference by state governments in the affairs of public colleges and universities. The committee's report, now approaching completion, is to be published this spring. Dr. Eisenhower also has continued to serve as a member of the board of directors of the Fund for Adult Education and has been appointed to the board of visitors of the U. S. Naval Academy.

His extramural assignments included a goodwill visit to Mexico. During the past summer, as personal representative of the President and as Special Ambassador for Latin American Affairs, he, with several associates including Palmer H. Futcher of the Johns Hopkins medical institutions, made a fact-finding tour of the Central American republics and Panama and participated in the sixth anniversary of the achievement of commonwealth status by Puerto Rico. Upon his return from this trip he wrote, in addition to his official report to the President, an article for the Spanish-language edition of *Life* entitled "A Frank Talk with Latin Americans."

—CHARLES S. GARLAND



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EDITOR'S NOTES

THIS IS no ordinary issue of The Johns Hopkins Magazine. The typography is different from usual; the design of the pages is different; most important, so is the content itself.

Normally we concern ourselves with presenting, month by month, a sampling of the activities at Johns Hopkins. This month's content goes further. It is a review of where the University stands, today, and an indicator of the direction in which it is going.

The author is the only possible author for a story of this sort: the president of the University, in whose office come together the many strands of the University's organizational chart, and the many plans that are laid for the University's future course.

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The reader whose personal knowledge of Johns Hopkins stems from a half-century ago, or a quarter-century ago, or even a decade ago, will find many unfamiliar references in these pages: unfamiliar names, unfamiliar projects. But he will find much that he recognizes, also—notably the spirit of adventure and pioneering that has long been characteristic of Johns Hopkins.

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"Questioning, doubting, verifying, sifting, testing, proving, that which has been handed down; observing, weighing, measuring, comparing the phenomena of nature, open and recondite": thus did Daniel Coit Gilman, the first president of Johns Hopkins, describe the spirit of the University: "the constructive, up-building, invigorating, cherishing all that man has learned from nature and from his own experience, while removing the incrustations imposed by ignorance and bigotry."

The words and their spirit apply today.

*

This issue being an innovation for this magazine, we await with interest our readers' reaction to it. We will welcome yours.

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